UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 February 2005_.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☒ Claim(s) _6-13_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

1.   This Office Action is the response to the communication received on 02/22/05.

Amendment under 37 CFR § 1.111. Reconsideration of the instant application is

requested by applicants. All such supporting documentation has been placed of record

in the file.

2.   Claims 1 – 20 are still pending.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

In line 8 of claim 1, Applicant claims, "building intercepted data of coordinates of

positions of parts". This limitation is vague and indefinite as "building intercepted data

of coordinates of positions of parts", is nonsensical in terminology.

Also in lines 8-9, the limitation of "building relationships of items to failure rates of

parts" is also vague and indefinite. Correction is required.

Claim 3 recites the limitation "the operator" in lines 6 – 7. There is insufficient

antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the new board " in lines 12 – 14. There is

insufficient antecedent basis for this limitation in the claim.

Claims 3 and 18 recites the limitation "the data base" in lines 17 – 18. There is insufficient antecedent basis for this limitation in the claim. And for better clarification "data base", should be spelled as "database".

Claim 3 recites the limitation "chosen item " in line 21. There is insufficient antecedent basis for this limitation in the claim. One would have to chose or select the item first before considering it chosen.

Claim 3 recites the limitation "the cleared file" in lines 25 – 26. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation " the step of selecting amending " in lines 20 – 22. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation " the related data for identification" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1, 2, 5, 14, 15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Bowman USPN 6,725,399 B1.

Regarding claim 1, Bowman anticipates a humanity interface development system of a testing program of a circuit board, comprising:

a display of a main menu by which an operator may select one of multiple items with data pre-built therein (FIG. 2, 1.3), the main menu including:

building configuration of objects to be tested (2: 40 –55), defining footing of objects to be tested(2: 40 –55), using a program generator(2: 47 – 50), building data of testing chapters (2: 40 –55), building documents and figure files of objects to be tested (FIG. 1, 2.0 Test Case Development), building reference data (3: 11 – 16, also 76: 1 – 10), building intercepted data of coordinates of positions of parts (3: 11 – 16), building relationships of items to failure rates of parts (3: 11 – 16), and linking and compiling files (74: 60 – 62, shows compiling and *note: instructions are linked during execution*), building of data of each object to be tested co-operating with the program generator to produce the required program (FIG. 2, see 1.2 – 1.8), and the items of building data of testing chapters and linking and compiling files co-operating with steps of building of data of each object to be tested (74: 60 – 62, shows compiling and *note: instructions are linked during execution*), so that the operator may conveniently use data base and programs that are built according to existing orders of the system for testing a circuit board (31:23 –27, see database).

Regarding claim 2, the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein building configuration of objects to be tested includes the following steps:

selecting a name an object to be tested (48: 33, see test plan identifier):

displaying a name of the object to be selected from an existing database of a display, choosing and identifying the name of the object (23:20 –25, see select and add from pull down);

displaying the data of the object to be tested (23:10, see date):

displaying original chosen records in the database to facilitate *judgment* of following addition and amendment (See Example 3 on Column 23); and

selecting processed items (See Example 3 on Column 23:35, see step 14 in table);

selecting items of addition, deletion, amendment or returning to a previous page, wherein if the item of addition is chosen, the operator needs to input the data of the new board object to be tested, then store the data, and then return to the step of selecting the name of the object to be tested (6:30 – 35, see delete and update);

if the item of deletion is chosen, the data of the object to be tested is deleted directly (6:30 – 35, see delete);

if the item of amendment is chosen, the data of the object to be tested is amended, and is stored (6:30 – 35, see update);

if the item of returning to the previous page is chosen, the operator returns to the display of the main menu, whereby contents of each basic configuration of the objects to be tested is built (6:50 – 67).

Regarding claim 5, the humanity interface development system of a testing program of a circuit board in accordance with claim 4, wherein a procedure of selecting a testing flow chart includes:

a process of file maintenance or reproduction (48: 43, see definition and maintenance), and selecting a button of a testing flow chart (48: 43 – 46, see graphical user interface operation).

Regarding claim 14, the humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein the process of file maintenance or reproduction includes the following steps:

selecting file maintenance or reproduction: selecting the process of file maintenance or reproduction, (Bowman, 48: 43, see definition and maintenance) if the process of file maintenance is selected, it is necessary to select a manner of file maintenance, if the process of reproduction is selected, it is necessary to select a manner of reproduction; wherein, if the operator selects the manner of file maintenance, it includes the following steps (Bowman, 48: 43, see definition and maintenance):

selecting a class of a program code (7: 15 – 20):

selecting a testing parameter or a debugging parameter, then returning to a
display of selecting a testing flow chart, to respectively perform a design of a testing
program or a debugging program; selecting amending the program code (48: 43 – 46,
see graphical user interface operation):

selecting a content of amendment for testing or debugging, so as to select a
number of the primary and secondary testing or debugging step (Bowman, FIG. 4, 3.2),
and to make sure a content of the program, and selecting a manner of amendment for
different program code, so as to select a deletion, insertion or cancel working process
(Bowman FIG. 5, 4.4, also see associated text), then selecting confirmation, if selecting
the cancel process, then directly returning to a display of selecting a testing flow chart
(FIG.4, see data flow diagram 3.5), if selecting the deletion working process or
insertion working process, then amending the content of the data base, and then
returning to the step of selecting amending a program code (FIG. 4, 3.7);

selecting returning to a display of a program generator or returning to the display
of the main menu, then returning to an assigned position (75: 30 – 35, see test data
generator);

if the operator selects a manner of reproduction, it includes the steps of selecting
three modes of reproduction, including (76: 1 – 10):

a testing programs being reproduced mutually, the testing programs being
reproduced to the debugging programs, and the debugging programs being
reproduced mutually, after selection, filling the reproduced content, then selecting
confirmation, if not confirmed, then returning to a display of selecting the testing flow
chart, if confirmed, then copying the reproduced content and returning to a display of
filling the reproduced content to repeat the steps therefrom (76: 1 – 10).

Regarding claim 15, which claims similarly as claim 2, see rationale as previously
discussed above.

Regarding claim 17, which claims similarly as claim 2, see rationale as previously discussed above.

Claim Rejections - 35 USC § 103

6   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman USPN 6,725,399 B1 as applied in claim 1, in view of Sprenger et al. USPN 5,861,882.

Regarding claim 3, Bowman discloses all the claimed limitations as applied in claim 1 above. Bowman doesn't explicitly disclose if it is a new object to be tested (FIG. 8, 110), the operator proceeds with the following settings, including: and selecting a clamping tool: selecting an existing common clamping tool or making a new clamping tool and selecting a clamping tool: selecting an existing common clamping tool or making a new clamping tool; assigning a new number: defining a new number to the new board to facilitate identification; and inputting footing data: inputting data of each footing manually; if it is not a new object to be tested. However Sprenger in a similar configuration an analogous art does whoever disclose integrated testing which displays objects to be tested as well as a selection tool (see FIG. 5 – 7). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Bowman and Sprenger because, being able to test new and select new objects during testing would make the system more reusable.

8.   Claims 4 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Bowman USPN 6,725,399 B1 as applied in claim 1, in view of Grover et al. USPN

5,737,518.

Regarding claims 4, Bowman discloses all the claimed limitations as applied in
claim 1 including the additional limitations of the humanity interface development
system of a testing program of a circuit board in accordance with claim 1, wherein the a
procedure of using a program generator including the following steps:
displaying a name of the object to be tested (23:10, see date):
displaying a name an object to be tested and the related data for identification of
a designer (23:20 –25, see select and add from pull down), confirming: if the operator
confirms the object to be tested, the following procedure is performed (7: 50 – 60, see
validating); if the operator does not confirm the object to be tested the main menu is
displayed (7: 50 – 60, see validating, Examiner is interpreting this limitation to be if not
validated from above recitation). Bowman doesn't explicitly disclose selecting the
program manner where the operator may respectively select the modes of the program
parameter, including testing, debug or limit. However, Grover does disclose in 2: 17 –
20, that " Because each object usually has many attributes, such programs can be
quite complex and time, consuming to develop, and must themselves be tested and
debugged". Therefore it would have been obvious to one of ordinary skill in the art at
the time the invention was made to combine, Bowman and Grover because, debugging
during testing would ensure that all programs being developed are being tested
properly and this inherently makes the testing more efficient.

Regarding claim 16, which claims similarly to claim 4, see rationale above in
previously discussed claim.

9.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman
USPN 6,725,399 B1 as applied in claim 6, in view of Pope et al. USPN 5,335,342.

Regarding claim 8, Bowman discloses the humanity interface development system of a testing program of a circuit board (FIG. 5). Bowman doesn't explicitly disclose a flow chart including judging a parameter and determining if it is a new step or an old step, to respectively enter the step of definition of a new step or download of an old step and returning to a display of selecting a testing flow chart. Bowman does disclose numerous test plans and schedules (FIG. 5) as well as implementing new parameters and modifying and upgrading test parameters (7: 60 – 67). Pope discloses starting a flow chart as well as comparing (judging) a parameter FIG.5, 508. Therefore it would have been obvious to one of ordinary skill in the art to combine Bowman and Pope because, being able to compare or determine newer or more up to date parameters during testing would improve the ease of modification.

10.   Claims 18 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman USPN 6,725,399 B1 as applied in claim 1, in view of Silva et al. USPN 6223,306 B1.

Regarding claim 18, Bowman discloses all the claimed limitations as applied in claim 1 above.

selecting an object to be tested (FIG. 3, 2.7): selecting the corresponding object to be tested, or selecting to return to the main menu to return to an assigned location (FIG. 3, 2.3, and 2.7, and associated text);

selecting inspection or building (75: 30 – 35, for building see test generating): after selecting the object to be tested, then selecting inspecting the circuit board or building the data base, if selecting the circuit board, then selecting controlling the display to enlarge an inspection picture, if selecting building the data base, then selecting building a related coordinate (and see database in FIG. 4, 3.7).

Bowman doesn't explicitly disclose selecting controlling the picture: selecting locally enlarging the selection picture using a mouse or enlarging a portion thereof if selecting locally enlarging the inspection picture by the mouse moving the mouse directly and if selecting enlarging the portion of the inspection picture, then forming a

small sized enlarged inspection picture as well as selecting building the related coordinate: selecting the mode of building the related coordinate for the reference point or member. However, Silva does disclose zooming and controlling size or position and number of pixels the image would be zoomed in on (amplified) (14: 45 – 50). Therefore it would have been obvious to one or ordinary skill in the art at the time the invention was made to combine Bowman and Silva because, being able to identify and view images and objects during testing would allow the user to better view and modify objects.

Regarding claim 19 Bowman discloses all the claimed limitations as applied in claim 1 above, including the added features of the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of building relationships of items to failure rates of parts includes the following steps (8: 5 – 25): selecting a name of an object to be tested (8: 50 – 55, see test cases). Bowman doesn't disclose displaying the picture so as to indicate the picture of the corresponding part. Silva discloses a viewing tool which obtains during testing (14: 45 – 50). Therefore it would have been obvious to one of ordinary skills in the art at the time the invention was made to combine Bowman and Silva because, being able to identify and view images and objects during testing would allow the user to better view and modify objects.

Regarding claim 20, the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein a procedure of linking and compiling files includes the following steps (74: 60 – 62, shows compiling and note: instructions are linked during execution) selecting the name and picture of a object to be tested (for image see Silva 14: 45 – 50); after confirmation, then making the testing program by a compiling process, if not confirmed, returning to the main menu (Bowman, 7: 10 – 20, for confirmation see valid).

Allowable Subject Matter

11.   Claims 6 – 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

" wherein selecting the item of a testing flow chart is changed and designed according to different testing processes and manners, and the most complete process of selecting the item of a testing flow chart includes the following steps: setting power supply of the system, setting a measuring signal, a third pause, closing an exciting signal, a fourth pause, updating codes of a testing program, and updating codes of a debug program".

Response to Arguments

12.   Applicant's arguments filed 02/22/2005 have been fully considered but they are not persuasive.

Argument (1), on page 18 of Applicant's response Applicant argues that in claim 1, that Bowman doesn't disclose "defining a footing of objects to be tested", and states that his limitation is directed to the actual shape of the circuit board being tested and also further argues that the limitation of "building intercepted coordinates of positions of parts", is also not taught and that, Bowman doesn't disclose identifying coordinates of position of any physical structures.

Response (1), while Applicant's plain language of claims only calls for "defining a footing of objects to be tested" and "building intercepted coordinates of positions of parts", Applicant is arguing for limitations not presented in claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., directed to the actual shape of the circuit board being tested and identifying coordinates of position of any physical structure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Hence Applicant's argument is moot.
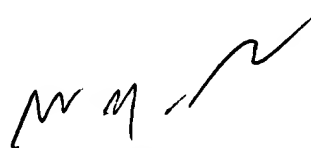
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-272-3698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free).

Ck

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PRIMARY EXAMINER